

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 069 - 00256 County OHIO District TRIADELPHIA
Quad VALLEY GROVE Pad Name ESTHER WEEKS OHI PAD Field/Pool Name PANHANDLE
Farm name ESTHER H WEEKS Well Number ESTHER WEEKS OHI 201H
Operator (as registered with the OOG) SWN PRODUCTION COMPANY, LLC
Address PO BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4430673.39 Easting 538180.29
Landing Point of Curve Northing 4430517.36 Easting 537505.27
Bottom Hole Northing 4431935.57 Easting 536833.63

Elevation (ft) 1256.9 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)
SOBM

Date permit issued 12/05/2017 Date drilling commenced 02/17/2018 Date drilling ceased 03/31/2018
Date completion activities began 05/31/2018 Date completion activities ceased 07/07/2018
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 569' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 833' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 701' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed
[Signature] 11/28/18

RECEIVED
Office of Oil and Gas
OCT 01 2018
Reviewed by: SB 11-28-18

WR-35
Rev. 8/23/13

API 47-069 - 00255 Farm name ESTHER H WEEKS Well number ESTHER WEEKS OHI 201H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24	20	126'	NEW	J-55/94#		Y
Surface	17.5	13.375	680'	NEW	J-55/54.50#	426.9'	Y, 49 bbls
Coal	See Intermediate						
Intermediate 1	12.25	9.625	2200'	NEW	J-55/36#		Y, 38 bbls
Intermediate 2							
Intermediate 3							
Production	8.75/8.50	5.5	12592'	NEW	P-110/20#		Y
Tubing		2.375	7526'	NEW	L-80/4.7#		N
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	GROUT TO SURFACE				SURFACE	24
Surface	CLASS A	704	15.60	1.20	844.80	SURFACE	8
Coal	See Intermediate						
Intermediate 1	CLASS A	813	15.60	1.18	959.34	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	CLASS A	2239	15.60	1.19	2664.41	SURFACE	24
Tubing							

Drillers TD (ft) 12592' Loggers TD (ft) 12592'
 Deepest formation penetrated MARCELLUS Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6486'

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

SURFACE: 7 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 INTERMEDIATE: 24 CENTRALIZERS - EVERY THIRD JOINT OF CASING
 PRODUCTION: 181 CENTRALIZERS - EVERY THIRD JOINT FROM SURFACE TO TOP OF CURVE, THEN EVERY JOINT UNTIL TD

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47-069 - 00255 Farm name ESTHER H WEEKS Well number ESTHER WEEKS OHI 201H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
	SEE	ATTACHMENT	1		

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
		SEE	ATTACHMENT	2				

Please insert additional pages as applicable.

WR-35
Rev. 8/23/13

API 47- 069 - 00255 Farm name ESTHER H WEEKS Well number ESTHER WEEKS OHI 201H

PRODUCING FORMATION(S)	DEPTHS		
MARCELLUS	6642'	TVD	7311' MD

Please insert additional pages as applicable.

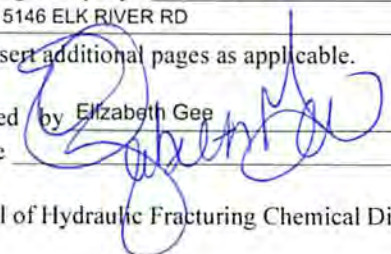
GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump
 SHUT-IN PRESSURE Surface 2753 psi Bottom Hole _____ psi DURATION OF TEST _____ hrs
 OPEN FLOW Gas 6116 mcfpd Oil 268 bpd NGL _____ bpd Water 236 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
	SEE	ATTACHMENT	3		

Please insert additional pages as applicable.

Drilling Contractor SWN DRILLING COMPANY
 Address PO BOX 12359 City SPRING State TX Zip 77391-2359
 Logging Company BAKER HUGHES
 Address 1681 E MAIN STREET City BRIDGEPORT State WV Zip 26330
 Cementing Company SCHLUMBERGER WELL SERVICES
 Address 1080 US-33 City WESTON State WV Zip 26452
 Stimulating Company HALLIBURTON ENERGY SERVICES INC
 Address 5146 ELK RIVER RD City BLUE CREEK State WV Zip 25026

Please insert additional pages as applicable.

Completed by Elizabeth Gee Telephone 832-796-7632
 Signature  Title Staff Regulatory Analyst Date 12/28/2018

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

ESTHER WEEKS OHI 201H
ATTACHMENT 1
PERF REPORT

STAGE NUM	Perf Date	Perf Top MD	Perf Bottom MD	# SHOTS PER STG
1	4/3/2018	12,503	12,404	36
2	6/1/2018	12,369	12,262	42
3	6/2/2018	12,228	12,122	42
4	6/2/2018	12,089	11,982	42
5	6/3/2018	11,949	11,842	42
6	6/3/2018	11,809	11,702	42
7	6/3/2018	11,669	11,562	42
8	6/3/2018	11,529	11,422	42
9	6/4/2018	11,389	11,282	42
10	6/4/2018	11,249	11,142	42
11	6/4/2018	11,109	11,002	42
12	6/4/2018	10,969	10,862	42
13	6/5/2018	10,829	10,722	42
14	6/5/2018	10,685	10,582	42
15	6/5/2018	10,549	10,442	42
16	6/6/2018	10,409	10,302	42
17	6/6/2018	10,271	10,162	42
18	6/6/2018	10,129	10,022	42
19	6/6/2018	9,989	9,882	42
20	6/6/2018	9,849	9,742	42
21	6/7/2018	9,709	9,602	42
22	6/7/2018	9,569	9,462	42
23	6/7/2018	9,426	9,322	42
24	6/7/2018	9,289	9,182	42
25	6/8/2018	9,149	9,042	42
26	6/8/2018	9,009	8,902	42
27	6/8/2018	8,869	8,762	42
28	6/8/2018	8,729	8,622	42
29	6/9/2018	8,589	8,482	42
30	6/9/2018	8,449	8,342	42
31	6/9/2018	8,309	8,202	42
32	6/10/2018	8,169	8,062	42
33	6/10/2018	8,029	7,922	42
34	6/10/2018	7,889	7,782	42
35	6/11/2018	7,749	7,642	42
36	6/11/2018	7,609	7,502	42
37	6/11/2018	7,469	7,362	42

ESTHER WEEKS OHI 201H

ATTACHMENT 2

STIM REPORT

STAGE NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment	Max Breakdown	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbls	Amount of nitrogen/othe
1	5/30/2018	71.1	8,444		3,916	277,580	8,210	0
2	6/2/2018	56.7	7,531	6,211	8,681	280,320	6,838	0
3	6/2/2018	99.3	7,995	6,127	4,598	284,500	4,888	0
4	6/3/2018	99.5	8,028	6,463	4,772	279,820	4,319	0
5	6/3/2018	98.9	7,781	6,068	4,787	274,540	4,450	0
6	6/3/2018	99.7	7,632	5,442	4,673	267,900	4,101	0
7	6/3/2018	99.8	7,631	6,000	4,799	271,700	3,948	0
8	6/4/2018	100	7,552	5,299	4,745	270,920	4,022	0
9	6/4/2018	99.7	7,641	6,374	4,797	269,860	4,237	0
10	6/4/2018	99.2	7,694	5,608	4,924	280,820	3,826	0
11	6/4/2018	100	7,488	4,216	4,970	272,760	3,890	0
12	6/5/2018	99.7	7,690	5,806	4,470	282,800	3,960	0
13	6/5/2018	93.8	7,582	5,874	4,660	267,100	3,679	0
14	6/5/2018	99.9	7,615	5,628	4,739	273,880	3,843	0
15	6/5/2018	96.9	8,008	5,762	4,156	266,900	3,687	0
16	6/6/2018	9128	7,555	5,464	4,975	265,200	3,803	0
17	6/6/2018	93	7,499	5,782	5,040	273,780	3,615	0
18	6/6/2018	91.1	7,369	5,951	4,578	285,600	3,783	0
19	6/6/2018	99.1	7,552	5,746	4,430	271,280	3,616	0
20	6/7/2018	98.4	7,662	5,743	4,606	272,240	3,623	0
21	6/7/2018	94.9	7,472	5,471	5,136	285,420	3,564	0
22	6/7/2018	94.7	7,448	5,711	4,553	271,100	3,381	0
23	6/7/2018	94.2	7,575	6,098	4,620	276,500	3,518	0
24	6/7/2018	89.2	7,510	5,713	4,470	269,660	3,460	0
25	6/8/2018	98.2	7,451	6,477	4,530	279,940	3,296	0
26	6/8/2018	93.6	7,311	5,326	4,989	293,990	3,129	0
27	6/8/2018	94.4	7,140	5,618	4,578	279,060	3,234	0
28	6/8/2018	92	7,704	5,766	4,580	285,640	4,302	0
29	6/9/2018	94.4	7,245	5,555	4,370	268,560	3,283	0
30	6/9/2018	93.8	7,350	5,941	4,279	276,300	3,110	0
31	6/9/2018	93.7	7,322	5,609	4,212	296,100	3,214	0
32	6/10/2018	94.1	7,084	6,278	4,311	279,000	3,653	0
33	6/10/2018	89.1	7,355	5,825	4,888	221,160	2,737	0
34	6/10/2018	92.8	7,051	6,065	4,293	280,710	3,200	0
35	6/11/2018	94.2	6,982	6,376	4,387	275,020	3,699	0
36	6/11/2018	95	7,424	7,706	4,587	254,860	4,105	0
37	6/11/2018	93.6	7,258	6,248	4,513	272,860	3,011	0



Attachment 3

Well Name: Esther Weeks OHI 201H

47069002560000

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	0.00	0.00	569.00	569.00	
Top of Salt Water	833.00	833.00	NA	NA	
Pittsburgh Coal	701.00	701.00	711.00	711.00	
Pottsville (ss)	NA	NA	NA	NA	
Mauch Chunk (shale)	NA	NA	NA	NA	
Raven Cliff (ss)	NA	NA	NA	NA	
Maxton (ss)	NA	NA	NA	NA	
Greenbriar (ls)	NA	NA	NA	NA	
Big Injun (ss)	1878.00	1878.00	2107.00	2107.00	
Berea (siltstone)	2444.00	2444.00	6504.00	6110.00	
Rhinestreet (shale)	6504.00	6110.00	6699.00	6286.00	
Cashaqua (shale)	6699.00	6286.00	6810.00	6379.00	
Middlesex (shale)	6810.00	6379.00	6954.00	6486.00	
Tully (ls)	6954.00	6486.00	6996.00	6512.00	
Mahantango (shale)	6996.00	6512.00	7311.00	6642.00	
Marcellus (shale)	7311.00	6642.00	NA	NA	GAS

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/30/2018
Job End Date:	6/11/2018
State:	West Virginia
County:	Ohio
API Number:	47-069-00256-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Esther Weeks OHI 201H
Latitude:	40.02541018
Longitude:	-80.55254784
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,634
Total Base Water Volume (gal):	5,939,700
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	81.41089	Density = 8.340
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	1.83897	

HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			
SAND-PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
SCAL16486A	NALCO Champion	Scale Inhibitor					
				Listed Below			
SAND-COMMON WHITE-100 MESH, SSA-2, BULK (100003676)	Halliburton	Proppant					
				Listed Below			
BIO11219A BIOC1121	NALCO Champion	Biocide					
				Listed Below			
EXCELERATE LX-1	Halliburton	Friction Reducer					
				Listed Below			
HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	16.68974	
			Hydrochloric acid	7647-01-0	15.00000	0.26871	

			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02379	
			Polyacrylate	Proprietary	30.00000	0.02379	
			Methanol	67-56-1	60.00000	0.01331	
			Fatty acid ester	Proprietary	5.00000	0.00793	
			Benzyl-(C12-C16 Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	30.00000	0.00666	
			Ammonium chloride	12125-02-9	5.00000	0.00397	
			Ethoxylated fatty acid	Proprietary	5.00000	0.00397	
			Sodium chloride	7647-14-5	5.00000	0.00397	
			Glutaraldehyde	111-30-8	10.00000	0.00222	
			Ethylene Glycol	107-21-1	30.00000	0.00154	
			Amine Triphosphate	Proprietary	30.00000	0.00154	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Non-hazardous food substance	Proprietary	100.00000	0.00137	

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

*** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

LATITUDE: 40°02'30" BOTTOM HOLE

7444'

LATITUDE: 40°02'30" SURFACE HOLE

3047'

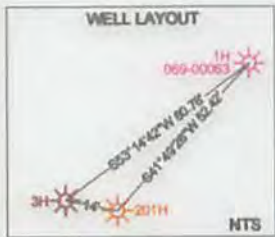
JHA SURVEYORS
ENGINEERS
ENVIRONMENTAL
GIS MAPPING

www.jhacompanies.com
68011 Vineyard Road
St. Clairsville, Ohio 43960
740-695-8100

NOTES ON SURVEY

1. COORDINATE SYSTEM IS UTM NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
2. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
3. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
4. NO DWELLINGS OR BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
5. NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
6. NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF THE LIMITS OF DISTURBANCE.
7. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.

12/28/2018



SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4430673.39
EASTING: 538180.29

LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4430517.35
EASTING: 537505.28

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4431935.56
EASTING: 536833.63

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EASTING: 537505.27

BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4431935.57
EASTING: 536833.63



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Handwritten signature and date: 9/18/18

LINE	BEARING	DISTANCE
L1	N31°52'16"E	2611.27'
L2	N19°57'03"E	2484.30'



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
OFFICE OF OIL & GAS
801 57TH STREET
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200

PROVEN SURVEY SOURCE OF GRADE GPS ELEVATION: (NAVD 88, US FT)

COMPANY: **SWN** Production Company, LLC

ESTHER WEEKS OHI

OPERATOR'S WELL #: 201H

API WELL #: **47** STATE **069** COUNTY **00256** PERMIT

WELL TYPE: OIL WASTE DISPOSAL PRODUCTION DEEP GAS LIQUID INJECTION STORAGE SHALLOW

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1256.9'

DISTRICT: TRADELPHIA COUNTY: OHIO QUADRANGLE: VALLEY GROVE, WV

SURFACE OWNER: KARLA J. WEEKS ACREAGE: ±101.47

OIL & GAS ROYALTY OWNER: KARLA J. WEEKS ACREAGE: ±101.47

DRILL DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION

CONVERT PLUG & ABANDON CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) AS-DRILLED

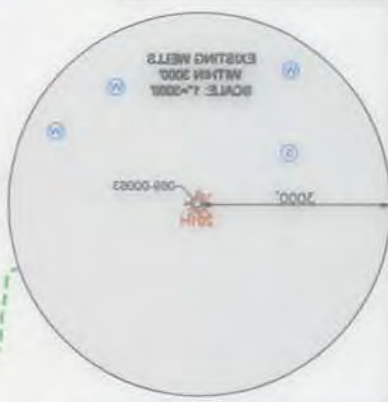
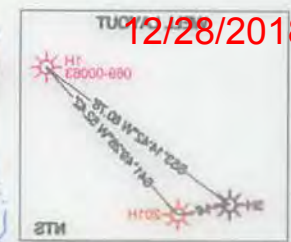
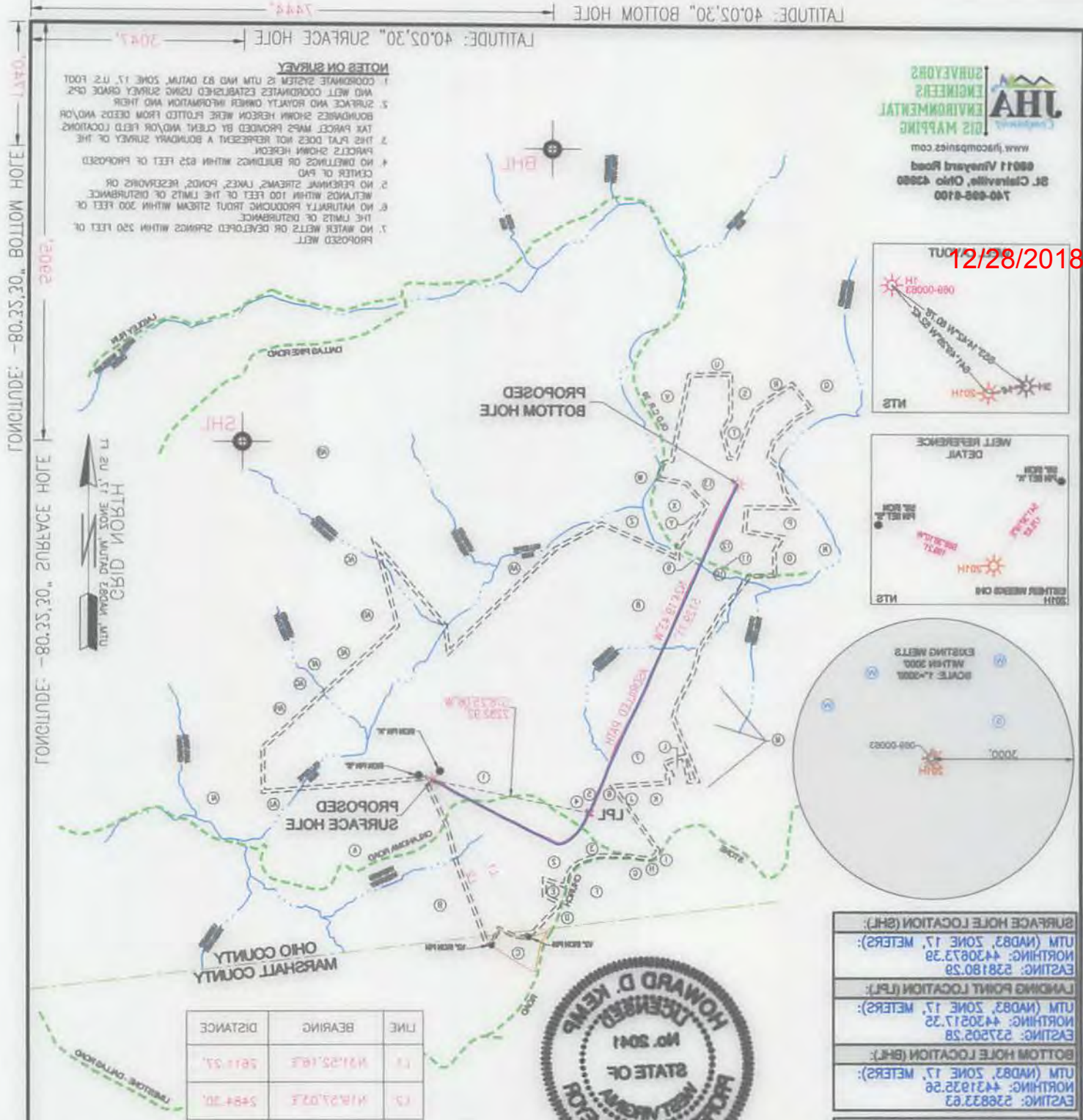
TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,656' TVD 12,592.0' TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378

DESIGNATED AGENT: BRITTANY WOODY ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378

LEGEND:	REVISIONS:	DATE:
○ PROPOSED SURFACE HOLE / BOTTOM HOLE		09-18-2018
⊙ EXISTING / PRODUCING WELLHEAD		
LPL* LANDING POINT LOCATION		
⊙ EXISTING WATER WELL		
⊙ EXISTING SPRING		
— SURVEYED BOUNDARY		
===== LEASE BOUNDARY		
— AS DRILLED PATH		
— PROPOSED PATH		
		DRAWN BY: D. REED
		SCALE: 1" = 2000'
		DRAWING NO: 2017-301
		WELL LOCATION PLAT

12/28/2018

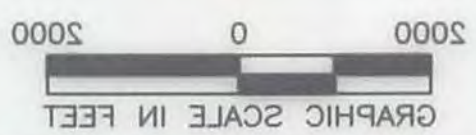


LINE	BEARING	DISTANCE
L1	N11°52'18"E	5611.53'
L2	N19°57'02"E	5484.30'



I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND OF ENVIRONMENTAL PROTECTION REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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SWN Production Company, LLC
 COMPANY: SWN
 ESTHER WEEKS OH 501H

APL WELL #: 47
 STATE: OHIO
 COUNTY: PERMIT
 OPERATOR'S WELL #: 000 00556
 ESTHER WEEKS OH 501H

UNITED STATES TOPOGRAPHIC MAPS
 WDEP
 OFFICE OF OIL & GAS
 601 27TH STREET
 CHARLESTON, WV 25034

WELL TYPE: OIL
 WASTE DISPOSAL
 PRODUCTION
 DEEP
 GAS
 LIQUID INJECTION
 STORAGE
 SHALLOW

WATERSHED: UPPER OHIO SOUTH
 DISTRICT: TRIADAPLAIN
 SURFACE OWNER: KARLA J. WEEKS
 OIL & GAS ROYALTY OWNER: KARLA J. WEEKS

DRILL DEEPER
 REDRILL
 FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION

CONVERT
 PLUG & ABANDON
 CLEAN OUT & REPLUG
 OTHER CHANGE (SPECIFY AS-DRILLED)

TARGET FORMATION: MARCELLUS

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC
 ADDRESS: P.O. BOX 1300
 CITY: JAME LEW STATE: WV ZIP CODE: 26278

DESIGNATED AGENT: BRITANY WOODY



ESTIMATED DEPTH: 6550' TMD 13,693.0' TMD

LEGEND:	PROPOSED SURFACE HOLE \ BOTTOM HOLE
	EXISTING \ PRODUCING WELLS
	LANDING POINT LOCATION
	EXISTING WATER WELL
	EXISTING SPRING
	PROPOSED PATH
	ACQUIRED PATH
	LEASE BOUNDARY
	SURVEYED BOUNDARY
REVISIONS:	
DATE: 08-18-2018	
DRAWN BY: D. REED	
SCALE: 1" = 2000'	
DRAWING NO: 2017-301	
WELL LOCATION PLAN	

WELL BORE TABLE FOR SURFACE / ROYALTY OWNERS		
TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL
1	KARLA J. WEEKS (S)/(R)	06-T19-0012.0000
TRACT	SURFACE OWNER	TAX PARCEL
2	KEITH A. & NANCY J. MCCORD	06-T19-0017.0000
3	JOHN E. BARTON	06-T19-0004.0000
4	JAMES S. HAUGHT	06-T19-0004.0002
5	JAMES S. HAUGHT	06-T19-0004.0004
6	MICHAEL TODD & ROBERTA MARLENE CLUTTER	06-T19-0004.0003
7	MITCHELL R. HOLMES & PATRICIA A. HOLMES	06-T19-0005.0000
8	JOHN E. WEEKS AND MARIMAR WEEKS	06-T19-0006.0000
9	WHEELING CREEK WATERSHED PROTECTION AND FLOOD PREVENTION COMMISSION	06-T14-0006.0001
10	JOHN E. AND TRINA M. WEITZEL	06-T14-0017.0000
11	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS	OLD C.R. 39
12	COLLEEN MARIE SOEHNLEIN, BETH ANN STEPHEN, CAROLINE LOUISE BOYD, JAMES C. BOYD, III, JENNIFER LEE BOYD AND THELMA JANECE BOYD	06-T14-0008.0000
13	CHRISTY M. BOPP	06-T14-0010.0000

12/28/2018


ADJOINING OWNERS TABLE		
TRACT	SURFACE OWNER	TAX PARCEL
A	JOHN E. AND MARIMAR WEEKS	06-T19-0011.0000
B	CHARLES R. AND JUDITH ANN AUBER	12-4-7.7
C	CONSOLIDATION COAL COMPANY	12-4-3
D	WENDELL & LUELLE M. HANLIN	06-T19-0017.0001
E	JOHN E. & R S MCCORD	06-T19-0017.0002
F	WENDELL ET UX HANLIN	12-4-3.6
G	SUSAN E. OBERLE	06-T19-0003.0002
H	SUSAN E. OBERLE	06-T19-0003.0001
I	JOHN E. BARTON	06-T19-0003.0007
J	JOHN E. BARTON	06-T19-0004.0006
K	JOHN E. BARTON	06-T19-0004.0001
L	LONDON C. STADLER, ERIC STADLER AND CHRISTOPHER M. STADLER	06-T19-0005.0001
M	JACK A. MITCHAM AND BERNICE A. MITCHAM	06-T14-0001.0012
N	WHEELING CREEK WATERSHED PROT	06-T14-0006.0000
O	CHARLES T. HOHMAN AND MARY SUSANNE HOHMAN (LIFE ESTATE); HEIDI SUE HOHMAN; JODIE KAY HOHMAN	06-T14-0007.0000
P	CHARLES THOMAS HOHMAN AND MARY SUSANNE HOHMAN (LIFE ESTATE); HEIDI SUE HOHMAN; JODIE KAY HOHMAN	06-T14-0010.0003
Q	JEFFREY O. AND ANN LUZADER	06-T14-0011.0008
R	JASON R. & HEATHER S. HINERMAN	06-T14-0010.0002
S	JOHN E. BOPP JR. AND CHRISTY M. BOPP	06-T14-0010.0004
T	LOIS K. HINERMAN	06-T14-0010.0005
U	KIRK D. AND JUDY L. LUZADER	06-T14-0011.0004
V	BETH ANN STEPHEN ET AL	06-T14-0015.0000
W	DANA EUGENE & RITA JEAN CLOVIS	06-T14-0019.0000
X	JOHN E. & T M WEITZEL	06-T14-0009.0000
Y	JOHN M. WETZEL AND ANGELA L. WETZEL	06-T14-0009.0001
Z	JOHN E. & TRINA M. WEITZEL	06-T14-0017.0000
AA	MARK A. & AMY M. FOSTER	06-T14-0021.0001
AB	LG HICKMAN, JM HICKMAN, CL HICKMAN, CS HICKMAN	06-T14-0038.0000
AC	ERIN E. SCHUL	06-T14-0052.0005
AD	PATRICK R. & CLARA L. MOCZEK	06-T14-0052.0000
AE	MITCHELL J. ANTHONY	06-T19-0013.0001
AF	MARK F. & KATHLEEN A. LICHWA	06-T19-0019.0000
AG	MARK F. LICHWA	06-T19-0022.0000
AH	KATHLEEN A. LICHWA	06-T19-0024.0000
AI	HERBERT & A M SHARP	06-T19-0009.0000
AJ	LYNN E. & KELLEY S. MOORE	06-T19-0010.0000

REVISIONS:	COMPANY:	 	
	OPERATOR'S	ESTHER WEEKS OHI	
	WELL #:	201H	
	DISTRICT:	COUNTY:	STATE:
	TRIADELPHIA	OHIO	WV
			DATE: 09-18-2018
			DRAWN BY: D. REED
			SCALE: N/A
			DRAWING NO: 2017-301
			WELL LOCATION PLAT

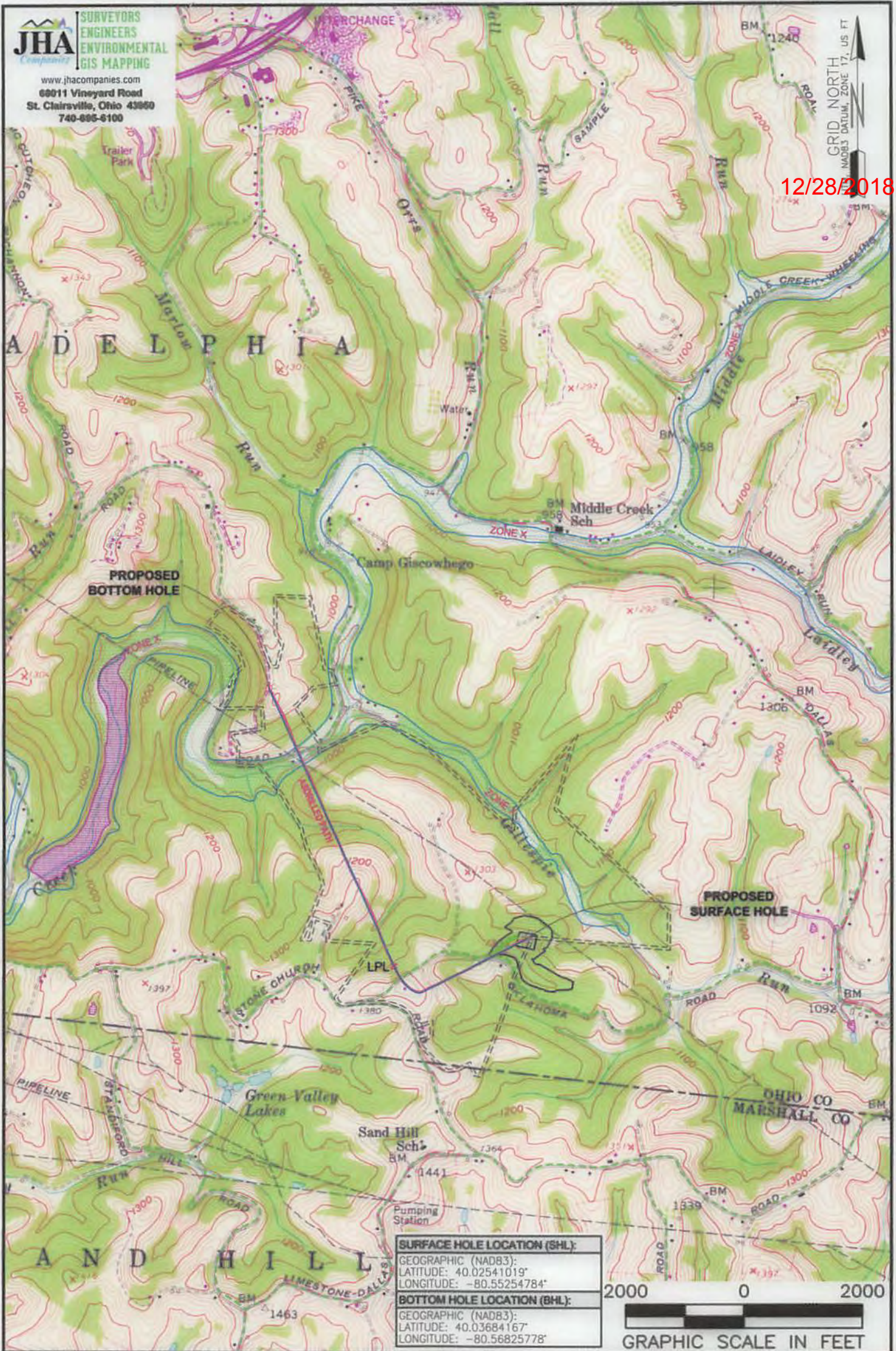
12/28/2018

TRACT	SURFACE OWNER (S) \ ROYALTY OWNER (R)	TAX PARCEL
1	KARLA J. WEEKS (S)\(R)	08-119-0012.0000
2	KEITH A. & NANCY J. MCCORD	08-119-0017.0000
3	JOHN E. BARTON	08-119-0004.0000
4	JAMES S. HAUGHT	08-119-0004.0002
5	JAMES S. HAUGHT	08-119-0004.0004
6	MICHAEL TODD & ROBERTA MARLENE CLUTTER	08-119-0004.0003
7	MITCHELL R. HOLMES & PATRICIA A. HOLMES	08-119-0002.0000
8	JOHN E. WEEKS AND MARIMAR WEEKS	08-119-0006.0000
9	WHEELING CREEK WATERSHED PROTECTION AND FLOOD PREVENTION COMMISSION	08-114-0006.0001
10	JOHN E. AND TRINA M. WEITZEL	08-114-0017.0000
11	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS	OLD C.R. 28
12	COLLEEN MARIE SOEHNLEIN, BETH ANN STEPHEN, CAROLINE LOUISE BOYD, JAMES C. BOYD, III, JENNIFER LEE BOYD AND THELMA JANECE BOYD	08-114-0008.0000
13	CHRISTY M. BOPP	08-114-0010.0000

TRACT	SURFACE OWNER	TAX PARCEL
A	JOHN E. AND MARIMAR WEEKS	08-119-0011.0000
B	CHARLES R. AND JUDITH ANN AUBER	12-4-77
C	CONSOLIDATION COAL COMPANY	12-4-3
D	WENDELL & LUELLA M. HANLIN	08-119-0017.0001
E	JOHN E. & R. S. MCCORD	08-119-0017.0002
F	WENDELL ET UX HANLIN	12-4-36
G	SUSAN E. OBERLE	08-119-0002.0002
H	SUSAN E. OBERLE	08-119-0002.0001
I	JOHN E. BARTON	08-119-0002.0007
J	JOHN E. BARTON	08-119-0004.0006
K	JOHN E. BARTON	08-119-0004.0001
L	LONDON C. STADLER, ERIC STADLER AND CHRISTOPHER M. STADLER	08-119-0002.0001
M	JACK A. MITCHAM AND BERNICE A. MITCHAM	08-114-0001.0012
N	WHEELING CREEK WATERSHED PROT	08-114-0006.0000
O	CHARLES T. HOHMAN AND MARY SUSANNE HOHMAN (LIFE ESTATE); HEIDI SUE HOHMAN; JODIE KAY HOHMAN	08-114-0007.0000
P	CHARLES THOMAS HOHMAN AND MARY SUSANNE HOHMAN (LIFE ESTATE); HEIDI SUE HOHMAN; JODIE KAY HOHMAN	08-114-0010.0002
Q	JEFFREY O. AND ANN LUSADER	08-114-0011.0008
R	JASON R. & HEATHER S. HINERMAN	08-114-0010.0002
S	JOHN E. BOPP JR. AND CHRISTY M. BOPP	08-114-0010.0004
T	LOIS K. HINERMAN	08-114-0010.0002
U	KIRK D. AND JUDY L. LUSADER	08-114-0011.0004
V	BETH ANN STEPHEN ET AL	08-114-0012.0000
W	DANA EUGENE & RITA JEAN CLOVIS	08-114-0019.0000
X	JOHN E. & T. M. WEITZEL	08-114-0008.0000
Y	JOHN M. WETZEL AND ANGELA L. WETZEL	08-114-0008.0001
Z	JOHN E. & TRINA M. WEITZEL	08-114-0017.0000
AA	MARK A. & AMY M. FOSTER	08-114-0021.0001
AB	L.G. HICKMAN, JM HICKMAN, CL HICKMAN, CS HICKMAN	08-114-0038.0000
AC	ERIN E. SCHUL	08-114-0022.0002
AD	PATRICK R. & CLARA L. MOCZEK	08-114-0022.0000
AE	MITCHELL J. ANTHONY	08-119-0013.0001
AF	MARK F. & KATHLEEN A. LICHWA	08-119-0019.0000
AG	MARK F. LICHWA	08-119-0022.0000
AH	KATHLEEN A. LICHWA	08-119-0024.0000
AI	HERBERT & A M SHARP	08-119-0009.0000
AL	LYNN E. & KELLEY S. MOORE	08-119-0010.0000

		COMPANY:		REVISIONS:	
DATE: 08-18-2018		OPERATOR'S: ESTHER WEEKS OHI			
DRAWN BY: D. REED		WELL #: 201H			
SCALE: N/A		COUNTY: OHIO		DISTRICT: TRADAPLHMA	
DRAWING NO: 2017-301		STATE: WV			
WELL LOCATION PLAT					

12/28/2018



SURFACE HOLE LOCATION (SHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.02541019°
LONGITUDE: -80.55254784°
BOTTOM HOLE LOCATION (BHL):
GEOGRAPHIC (NAD83):
LATITUDE: 40.03684167°
LONGITUDE: -80.56825778°



NOTES ON SURVEY

1. SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND/OR FIELD LOCATIONS.
2. THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
3. ALL INSETS ARE GRID NORTH UNLESS OTHERWISE DEPICTED.

LEGEND:

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ⊙ EXISTING / PRODUCING WELLHEAD
- LPL* LANDING POINT LOCATION
- ⬢ FLOOD PLAIN
- ACCESS ROAD
- - - PUBLIC ROAD
- ACCESS ROAD TO PREV. SITE
- ===== LEASE BOUNDARY
- PROPOSED PATH
- ASDRILLED PATH

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC	WELL (FARM) NAME: ESTHER WEEKS OHI	WELL # 201H	SERIAL # XXXX
ADDRESS: P.O. BOX 1300 JANE LEW, WV 26378	COUNTY - CODE OHIO - 069	DISTRICT: TRIADELPHIA	
SURFACE OWNER:	USGS 7 1/2 QUADRANGLE MAP NAME: VALLEY GROVE, WV		

